

1 **WHAT IS CLAIMED IS:**

2 1. A slot machine, comprising:
3 Sub A1

4 a central processing unit for operating the slot machine in response to a wager;

5 and

6 a reel mechanism including a motor, a symbol-bearing reel, and a reel driver,

7 said motor including a rotatable shaft, said reel being mounted to said

8 shaft, said reel driver including a local microcontroller distinct from

9 and coupled to said central processing unit, said reel driver being

10 coupled to said motor to cause said motor to rotate said reel, said local

11 microcontroller performing low-level reel driver operations

12 independent from said central processing unit.

13 2. The slot machine of claim 1, wherein in response to actuation by a player, said
14 reel is rotated and stopped to place the symbols of said reel in visual association with
15 one or more pay lines.

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17 3. The slot machine of claim 1, wherein said low-level reel driver operations
18 include monitoring said reel and at least partially controlling its position.

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20 4. The slot machine of claim 3, wherein said local microcontroller monitors said
21 reel by sampling its state multiple times per second in real time, and responds with
22 control commands for controlling the position of said reel.

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24 5. The slot machine of claim 1, wherein said local microcontroller is serially
25 connected to said central processing unit.

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27 6. The slot machine of claim 1, wherein said reel driver includes a printed circuit
28 Sub A2 board proximate said reel, said microcontroller being mounted to said printed circuit
29 board.

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31 7. The slot machine of claim 1, wherein said central processing unit issues high-
32 level commands to said local microcontroller, said high-level commands including a

1 start spin command for spinning said reel and a stop command for stopping said reel
2 at a specified stop position.

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4 8. The slot machine of claim 1, wherein said reel includes an encoder for
5 indicating the position of said reel, and wherein said reel driver includes an optical
6 detector for reading said encoder, said local microcontroller being coupled to said
7 optical detector to monitor the position of said reel.

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9 9. A slot machine, comprising:
10 a motor including a rotatable shaft;
11 a symbol-bearing reel mounted to said shaft;
12 a reel driver including a local microcontroller serially linked to said central
13 processing unit, said reel driver being coupled to said motor to cause
14 said motor to rotate said reel, said local microcontroller performing
15 low-level reel driver operations related to rotation of said reel; and
16 a central processing unit issuing high-level commands to said reel driver
17 related to the rotation of said reel.

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19 10. The slot machine of claim 9, wherein said high-level commands include a start
20 spin command and a stop command, said start spin command instructing said reel
21 driver to cause said motor to rotate said reel, said stop command instructing said reel
22 driver to stop said motor from rotating said reel at a specified stop position

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24 11. The slot machine of claim 10, wherein said low-level commands include
25 sampling a state of said reel in real time and at least partially controlling its position.

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27 12. A slot machine, comprising:
28 a motor including a rotatable shaft;
29 a symbol-bearing reel mounted to said shaft;
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31 a reel driver including a local microcontroller, said reel driver being coupled
32 to said motor to cause said motor to rotate said reel; and

1 a central processing unit for issuing a start spin command and a stop command
2 to said reel driver, said start spin command instructing said reel driver
3 to cause said motor to rotate said reel, said stop command instructing
4 said reel driver to stop said motor from rotating said reel at a specified
5 stop position;
6 said local microcontroller monitoring said reel in real time and at least
7 partially controlling its position after said start spin command and prior
8 to said stop command.
9

10 13. The slot machine of claim 12, wherein said reel includes an encoder for
11 indicating the position of said reel, and wherein said reel driver includes an optical
12 detector for reading said encoder, said local microcontroller being coupled to said
13 optical detector to monitor the position of said reel in real time.

14 ADD A57